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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,536	06/15/2006	Ja Yeon Cho	09983.0154USWO	3164
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EXAMINER				
ROGERS, MARTIN K				
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1791				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/583,536

**Applicant(s)**

CHO, JA YEON

**Examiner**

MARTIN ROGERS

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6, 8, 11 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8, 11, and 22-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 6, 11, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinichi et al. (Japanese Kokai JP8323845 already of record) in view of Uhlig (USP 3740181), Hagano et al. (Pre-Grant Publication 2002/0125254), Farrell (USP 4038006) and optionally Maruniak et al. (USP 3817390).

In regards to claims 1, 6, and 22 Shinichi discloses a method for manufacturing a PET ([0004]) container (Figure 14) comprising the steps of blow molding a preform in a cavity (Figure 12) that has a handle forming portion for compressing both sides of the bottle to form the handle section (Figure 12), conveying the preform by clamping its neck (Figure 12: 82), creating a hole in the compressed handle area ([0096]), and using a bonding apparatus for bonding a cut-off portion remaining in the handle section after cutting off the compressed portion of the handle section (Figure 17). In the invention of Shinichi, the apparatus used to form a hole in the handle area is not disclosed and the

unbonded flanges of the handle area are sealed by using ultrasonic welding of a prefabricated piece ([0099] and [0100]).

Uhlig discloses that when blow molding a handled container, it is beneficial to have an intermediate blowing step in which the parison is blow molded into a cavity that creates a shape which allows the handle section to be compressed (Figure 12) for the benefit of creating a desirable amount of biaxial stretching in the handled container (Column 1, lines 45-49). Uhlig further discloses that it was well known in the art at the time of the invention to use a mold punch (Figure 17) to remove the compressed portion of a container handle.

Hagano discloses that it was known in the art to injection mold around the seam of a blow molded container by compressing the cut-off portion and overmolding the edges with an injection resin ([0090]). One of ordinary skill in the art at the time of the invention would have realized that by injection molding the sealing member directly onto the container of Shinichi rather than prefabricating it and then welding it in place, the amount of equipment and the production time of the process would be reduced.

Additionally, Maruniak also discloses that sealing flanges through insert injection molding around compressed flanges (Figure 3: 17) is well known and suggests to one of ordinary skill in the art that through the use of insert injection molding, an improved seal can be created with fusion of the flange to the injected resin (Column 3, lines 44-45). Therefore, one of ordinary skill in the art would have also found it obvious to seal the flanges of the above combination with the insert injection molding required by the claims for the benefit of achieving the improved seal disclosed by Maruniak.

Therefore, in order to create a biaxially stretched container while saving on equipment costs and processing time, one of ordinary skill in the art would have found it obvious to use the preliminary blow molding step taught by Uhlig to create the container disclosed by Shinichi, cut the compressed portion of the container taught by Shinichi with the punch disclosed by Uhlig, and then bond the cut-off portions with the injection mold taught by Hagano or Maruniak.

This hypothetical combination does not disclose that the handle forming portion of a third blow mold be configured to penetrate the body of the bottle in a handle forming area.

Farrell suggests to one of ordinary skill in the art at the time of the invention that once an integral handle is formed into a container and sealed (Column 1, lines 27-30), it is possible to give it a desired shape (Column 5, lines 26-30) by blow molding the handled container in a mold with sections that contact each other through the handle aperture (Figure 5: 16). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to use a mold with opposing protrusions which contact through the handle aperture in order to mold the handle portion of the finished container into a different shape.

In regards to claims 2 and 24, Hagano further discloses an insert inject mold having a compressing member for compressing both sides of an the cutoff portion (Figure 9: 67). Maruniak also discloses that the flanges be compressed during injection molding (Figure 3: 17).

In regards to claim 11, Hagano further discloses that use of an insert injection mold (Figure 9). Marunkai also further discloses the use of an insert injection mold (Figure 3: 25).

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Shinichi et al. (Japanese Kokai JP8323845 already of record) in view of Uhlig (USP 3740181), Hagano et al. (Pre-Grant Publication 2002/0125254), Farrell (USP 4038006) Maruniak et al. (USP 3817390) as applied to claims 1 and 6 above, and further in view of Fischer et al. (USP 4123217).

In regards to claim 3, the previous combination does not disclose that the mold punch has a heater installed on an end of the mold punch.

Fischer discloses installing a heater at the end of the mold punch (Column 2, line 65) for the benefit of allowing a cooled blow mold to be used which creates a cleanly-formed handle region (Column 2, lines 66-68). Although Fischer is concerned with punching a handle into a parison that has already been heat bonded within the handle region, one of ordinary skill in the art at the time of the invention would have been motivated to apply the teachings of Fischer to the cutting step disclosed by Shinichi for the benefit of creating a clean shear in the handle area, preventing any stretching or deformation of the parison which might otherwise occur.

In regards to claim 8, the previous combination does not teach that use of a mold punch having a heater installed on its end when the parison is thick.

Fischer discloses installing a heater at the end of the mold punch (Column 2, line 65) for the benefit of allowing a cooled blow mold to be used which creates a cleanly-formed handle region (Column 2, lines 66-68). Although Fischer is concerned with punching a handle into a parison that has already been heat bonded within the handle region, one of ordinary skill in the art at the time of the invention would have been motivated to apply the teachings of Fischer to the cutting step disclosed by Shinichi for the benefit of creating a clean shear in the handle area, preventing any stretching or deformation of the parison which might otherwise occur.

It is the examiner's position that it is obvious to use the heated press disclosed by Fischer for essentially any container thickness. The thickness of the container is a design choice that one of ordinary skill in the art at the time of the invention would have modified to adjust the aesthetics and structural strength of the container.

Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinichi et al. (Japanese Kokai JP8323845 already of record) in view of Hagano et al. (Pre-Grant Publication 2002/0125254), Farrell (USP 4038006), Martin et al. (USP 4320789), and optionally Maruniak et al. (USP 3817390).

In regards to claims 23 Shinichi discloses a method for manufacturing a PET ([0004]) container (Figure 14) comprising the steps of injection blow molding a preform

[[0030]] in a cavity (Figure 12) and using a bonding apparatus for bonding a cut-off portion remaining in the handle section after cutting off the compressed portion of the handle section (Figure 17). In the invention of Shinichi, the unbonded flanges of the handle area are sealed by using ultrasonic welding of a prefabricated piece ([0099] and [0100]).

Hagano discloses that it was known in the art to injection mold around the seam of a blow molded container by compressing the cut-off portion and overmolding the edges with an injection resin ([0090]). One of ordinary skill in the art at the time of the invention would have realized that by injection molding the sealing member directly onto the container of Shinichi rather than prefabricating it and then welding it in place, the amount of equipment and the production time of the process would be reduced. Therefore one of ordinary skill in the art would have found it obvious to use the bond the cut-off portions with the injection mold taught by Hagano for the benefit of saving time and equipment costs.

Additionally, Maruniak also discloses that sealing flanges through insert injection molding around compressed flanges (Figure 3: 17) is well known and suggests to one of ordinary skill in the art that through the use of insert injection molding, an improved seal can be created with fusion of the flange to the injected resin (Column 3, lines 44-45). Therefore, one of ordinary skill in the art would have also found it obvious to seal the flanges of the above combination with the insert injection molding required by the claims for the benefit of achieving the improved seal disclosed by Maruniak.



This hypothetical combination does not disclose that the handle forming portion of a blow mold be configured to penetrate the body of the bottle in a handle forming area and embedding the seam into the container.

Farrell suggests to one of ordinary skill in the art at the time of the invention that once an integral handle is formed into a container and sealed (Column 1, lines 27-30), it is possible to give it a desired shape (Column 5, lines 26-30) by blow molding the handled container in a mold with sections that contact each other through the handle aperture (Figure 5: 16). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to use a mold with opposing protrusions which contact through the handle aperture in order to mold the handle portion of the finished container into a different shape.

Martin discloses blow molding (Column 4, line 64) a container so that its seam is protected inside a recess in the container walls (Column 3, lines 13-21). Therefore, in order to protect the seam in the handle of the bottle disclosed by the above hypothetical combination, it would have been obvious to one of ordinary skill in the art at the time of the invention to blow mold the formed containers in a mold which embeds the seam into the body of the container at the handle area to form an indentation around the seam and protect it (as disclosed by Martin).

In regards to claim 25, Hagano further discloses an insert injection molding process in which an intermediate portion of the seam is compressed and then bonded with injection molding (Figure 9). Maruniak also discloses an insert injection molding

process in which an intermediate portion of the seam is compressed and then bonded with injection molding (Figure 3).

2. Claims 1, 2, 6, 11, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uhlig (USP 3740181) in view of Mojonnier et al. (USP 3366290), Hagano et al. (Pre-Grant Publication 2002/0125254), Farrell (USP 4038006) and optionally Maruniak et al. (USP 3817390).

In regards to claims 1, 6, and 22 Uhlig discloses a method for manufacturing a bottle having a handle formed on a body (Figure 14) which comprises the steps of a first blowing operation performed in a blow mold to inflate an injection molded preform (Figures 11 and 12), a second blowing operation in which the container is further expanded by blow molding in a second mold that has a section for forming a handle in the container (Figure 15), and a cutting step in which a compressed portion of the handle section is cut off (Figure 17). The handle of the container created by the process of Uhlig does not employ the bonding apparatus required by claim 1 because when the flash in the compressed area is removed by the cutting apparatus of Uhlig, the seam is left bonded.

Mojonnier discloses that it is possible to create a handle in a container so that it is both liquid tight (Column 3, line 33) and comfortable to grip by leaving an elongated, unbonded flange in the handle area (Figure 2: 33b) that can be folded over while it is being bonded (Column 3, lines 41-45). Mojonnier does not disclose that the flanges be

bonded by an insert injection mold, but does disclose that they can be bonded by "heat sealing, adhesive or the like" (Column 2, line 34), suggesting to one of ordinary skill in the art that any well known method of bonding flanges can be used.

Hagano discloses that it is well known to use a bonding apparatus for bonding the ends of a cut-off portion ([0090]) of a blow-molded container in which both sides of the cut-off portion are compressed (Figure 9) and a resin is injected into a mold cavity to overmold the flanges and create a seal ([0090]). Therefore, it would have been obvious to one of ordinary skill in the art to make the handle of Uhlig more comfortable by adding the flanges disclosed by Mojonnier to the handle portion and then bonding them with the injection mold disclosed by Hagano.

Additionally, Maruniak also discloses that sealing flanges through insert injection molding around compressed flanges (Figure 3: 17) is well known and suggests to one of ordinary skill in the art that through the use of insert injection molding, an improved seal can be created with fusion of the flange to the injected resin (Column 3, lines 44-45). Therefore, one of ordinary skill in the art would have also found it obvious to seal the flanges of the above combination with the insert injection molding required by the claims for the benefit of achieving the improved seal disclosed by Maruniak.

Although Uhlig never explicitly states that the container be constructed of PET, such is well known in the art and would have been obvious to one of ordinary skill in the art at the time of the invention.

The above hypothetical combination does not disclose that the handle forming portion of a third blow mold be configured to penetrate the body of the bottle upon in a handle forming area.

Farrell suggests to one of ordinary skill in the art at the time of the invention that once an integral handle is formed into a container and sealed (Column 1, lines 27-30), it is possible to give it a desired shape (Column 5, lines 26-30) by blow molding the handled container in a mold with sections that contact each other through the handle aperture (Figure 5: 16). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to use a mold with opposing protrusions which contact through the handle aperture in order to mold the handle portion of the finished container into a desired shape.

In regards to claims 2 and 24, Hagano further discloses and insert inject mold having a compressing member for compressing both sides of an the cutoff portion (Figure 9: 67). Maruniak also discloses that the flanges be compressed during injection molding (Figure 3: 17).

In regards to claim 11, Hagano further discloses that use of an insert injection mold (Figure 9). Marunkai also further discloses the use of an insert injection mold (Figure 3: 25).

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Uhlig (USP 3740181), Mojonner et al. (USP 3366290), Hagano et al. (Pre-Grant Publication 2002/0125254), Farrell (USP 4038006) and Maruniak et al. (USP 3817390) as applied to claims 1 and 6 above, and further in view of Fischer et al. (USP 4123217).

In regards to claim 3, the previous combination does not disclose that the mold punch has a heater installed on an end of the mold punch.

Fischer discloses installing a heater at the end of the mold punch (Column 2, line 65) for the benefit of allowing a cooled blow mold to be used which creates a cleanly-formed handle region (Column 2, lines 66-68). Although Fischer is concerned with punching a handle into a parison that has already been heat bonded within the handle region, one of ordinary skill in the art at the time of the invention would have been motivated to apply the teachings of Fischer to the cutting step disclosed by the previous combination for the benefit of creating a clean shear in the handle area, preventing any stretching or deformation of the parison which might otherwise occur.

In regards to claim 8, the previous combination does not teach the use of a mold punch having a heater installed on its end when the parison is thick.

Fischer discloses installing a heater at the end of the mold punch (Column 2, line 65) for the benefit of allowing a cooled blow mold to be used which creates a cleanly-formed handle region (Column 2, lines 66-68). Although Fischer is concerned with

punching a handle into a parison that has already been heat bonded within the handle region, one of ordinary skill in the art at the time of the invention would have been motivated to apply the teachings of Fischer to the cutting step disclosed by the previous combination for the benefit of creating a clean shear in the handle area, preventing any stretching or deformation of the parison which might otherwise occur.

It is the examiner's position that it is obvious to use the heated press disclosed by Fischer for essentially any container thickness. The thickness of the container is a design choice that one of ordinary skill in the art at the time of the invention would have modified to adjust the aesthetics and structural strength of the container.

### ***Response to Arguments***

Applicant argues on pages 8-12 that neither Hurst nor Martin discloses the invention of the amended claims because the handle forming portion in the molds of Hurst and Martin do not penetrate the body of the container such that they contact an opposing surface of the mold through the handle aperture. This is a newly added limitation which is moot in view of the new grounds of rejection.

Applicant argues on page 15 that Hagano is not analogous to the presently claimed invention because in the process of Hagano, the end portions are never stretched. The examiner notes that Applicant's arguments are directed to subject matter not presented in the claims. Applicant further argues that Hagano is not analogous because it discloses bonding an intermediate portion between two flanges rather than

just bonding the flanges. The examiner notes that Applicant appears to be arguing the references individually. It is the reference to Shinichi which requires that two flanges be bonded. Hagano was simply used to demonstrate that bonding flanges by overmolding is known in the art. One of ordinary skill would appreciate that this bonding method would also work on two flanges without an intermediate section.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN ROGERS whose telephone number is 571-270-7002. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00, and every other Friday, 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Martin Rogers/

/Richard Crispino/  
Supervisory Patent Examiner, Art Unit 1791